20th (10.45 P. M., April 19th, Philadelphia time), a second disturbance set in, commencing with a rapid increase of declination, the first swing of the magnet carrying it nearly a degree to the westward, whence it returned at 4.30 A. M. Its mean position was reached at 6 A. M. (1 A. M. Philadelphia time) and then its oscillations became very rapid, and continued so until 2 P. M., after which hour they became less. Both forces were also simultaneously disturbed, but their movements were much more limited than on Monday."

It is at once seen that there is a most remarkable coincidence in time between the magnetic storm in England and the aurora as seen here. The second magnetic storm also occurs simultaneously with the second aurora, and an absolute proof of the direct connection between the two phenomena is hereby established. It is interesting, also, to note that the magnetic disturbances for the most part slightly preceded the aurora, while on the other hand the electrical effects upon the telegraph wires were subsequent. This fact suggests magnetism as the primary cause of the aurora. The magnetic curves assumed by the streamers also favor this theory. The red flashes in the sky were probably accompanying electrical discharges, and many auroral effects may be due to the continual transmutation of the two forces.

Stated Meeting, May 5, 1882.

Present, 4 members.

Letters accepting membership were received from the Rev. Dr. Robins, No. 1821 Delancey Place, Philadelphia, April 26; from C. S. Sargent, dated Arnold Arboretum, Harvard University, Director's office, Brookline, Mass., April 26; from S. P. Sharples, A. M., No. 114 State street, Boston, April 29; from Franklin B. Hough, Department of Agriculture, Washington, D. C., May 2, and from George De B. Keim, No. 2009 Delancey Place, Philadelphia, April 25, 1882.

A photograph of M. Milne Edwards was received in a letter dated Museum d'Histoire Naturelle, Paris, April 7, with a request for Nos. 97, 102, 103 to complete a set of the Proceedings.

Letters of acknowledgment were received from the New Hampshire Historical Society (110); Museum of Comparative Zoölogy (110); American Antiq. Society (110); Rhode Island Historical Society (110); Connecticut Historical Society (110); Astor Library (110); New Jersey Historical Society (110):

C. L. Doolittle (110); Traill Green (110); T. C. Porter (110); W. B. Taylor (110); J. H. C. Coffin (110); J. J. Stevenson (110); Georgia Historical Society (110); H. Phillips, Jr., (110); Wyoming G. and Historical Society (110); Numismatic and Antiquarian Society (110); Buffalo S. N. S. (110); J. M. Hart (110); Chicago Historical Society (110), and the Royal Bavarian Academy (107, 108, Trans. XV, 2).

Letters of envoy were received from the Geological Survey of India, Calcutta, Jan. 4; the Royal Bavarian Academy, Feb. 18, and Mr. Wm. Blades, 23 Abchurch Lane, London, April 17, 1882.

Donations to the Library were reported from the Geological Survey, India; Academia dei Lincei; S. C. Geog., Bordeaux; Royal Astronomical Society; London Nature; Mr. W. Blades; Harvard University; Boston Society of Natural History; American Historical Society; American Philological Society; Silliman's Journal; Mrs. T. P. James; American Chemical Society; American Society of Civil Engineers; Franklin Institute; Journal of Pharmacy; Mr. H. Phillips, Jr.; American Chemical Journal; U. S. National Museum; Com. Internal Revenue; Weather Signal Bureau; Board of Health, New Orleans, and Academy of Sciences, St. Louis.

The death of Ralph Waldo Emerson, at Concord, Mass., April 27, aged nearly 80, was announced.

On motion of Mr. Phillips the President was requested to consider various communications from Professors James Hall, Geo. H. Cook, and J. P. Lesley, and to memorialize the President of the Senate of New York for the complete publication of the Palæontology of that State.

And the meeting was adjourned.